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NANOSCALE COHERENT OPTICAL
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Docket No.: H0498.70203US01

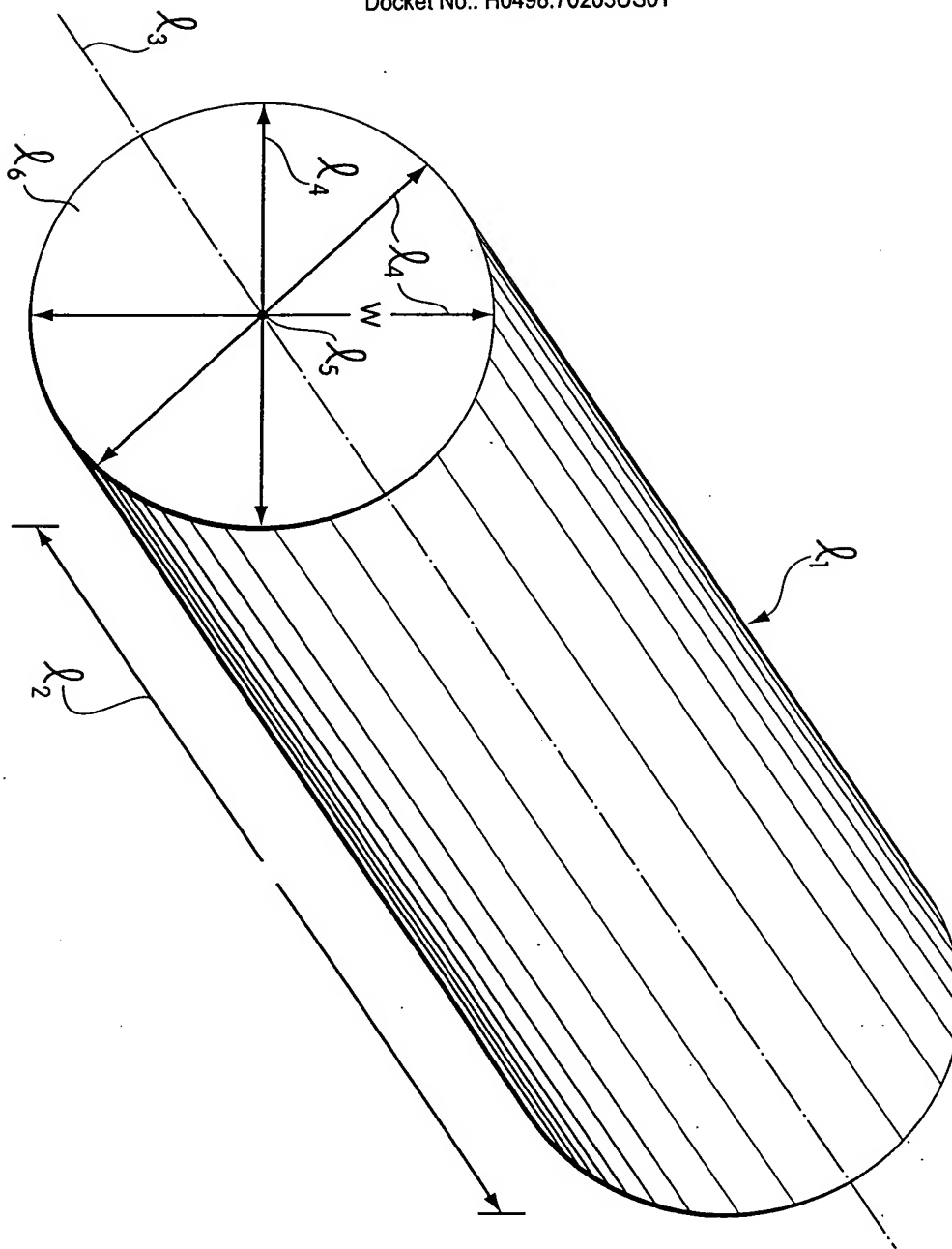


Fig. 1

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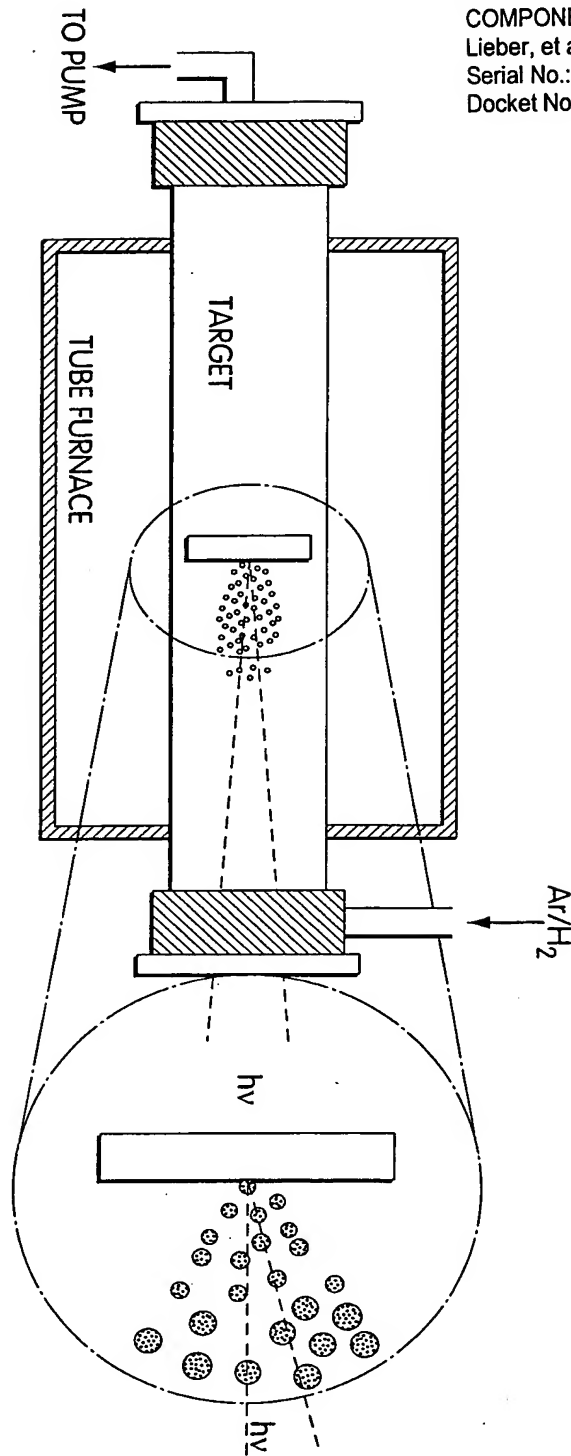


Fig. 2

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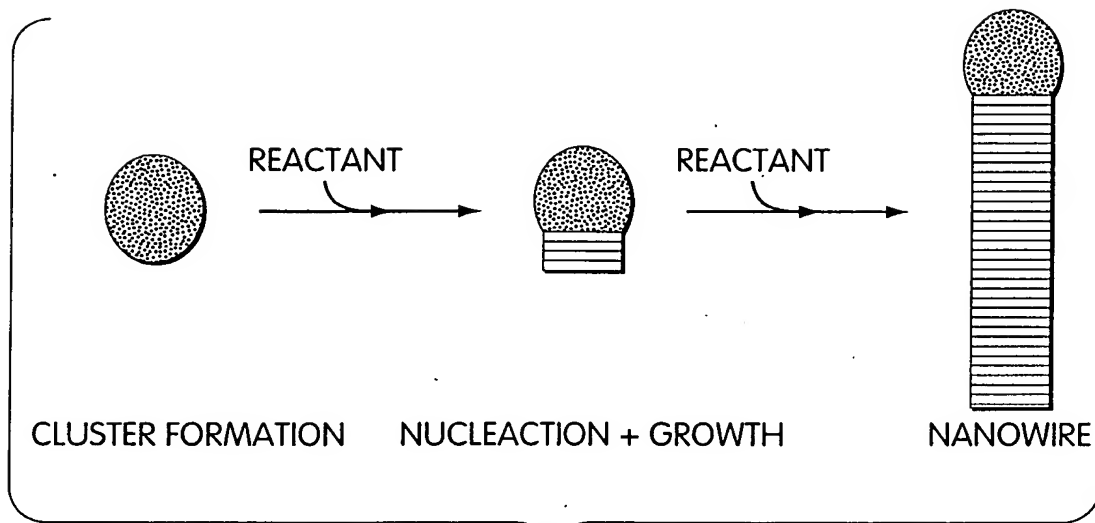


Fig. 3

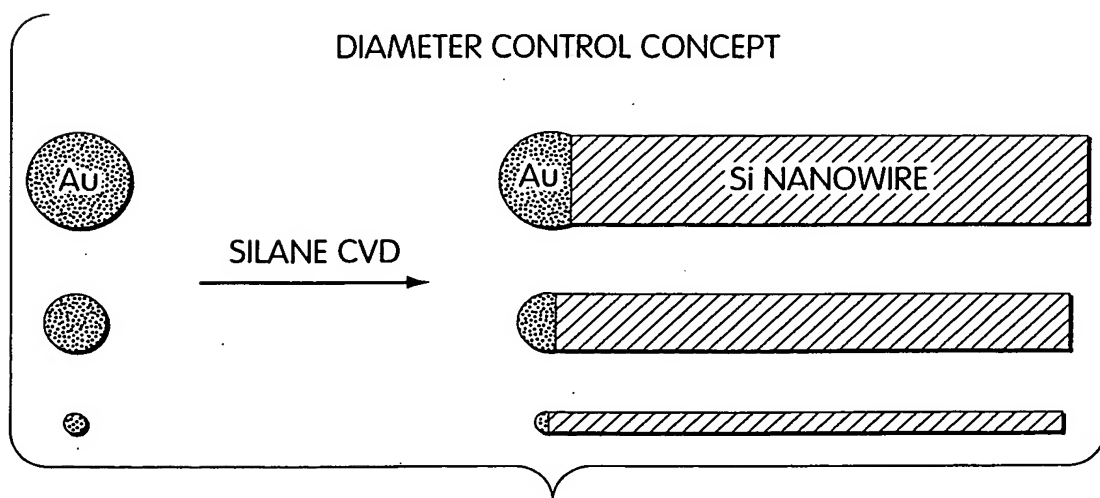


Fig. 4

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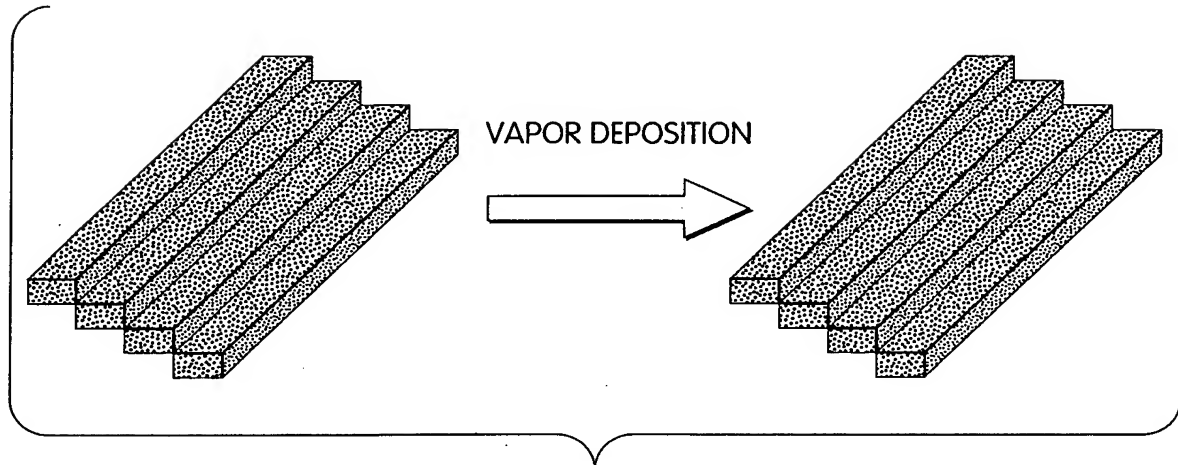


Fig. 5

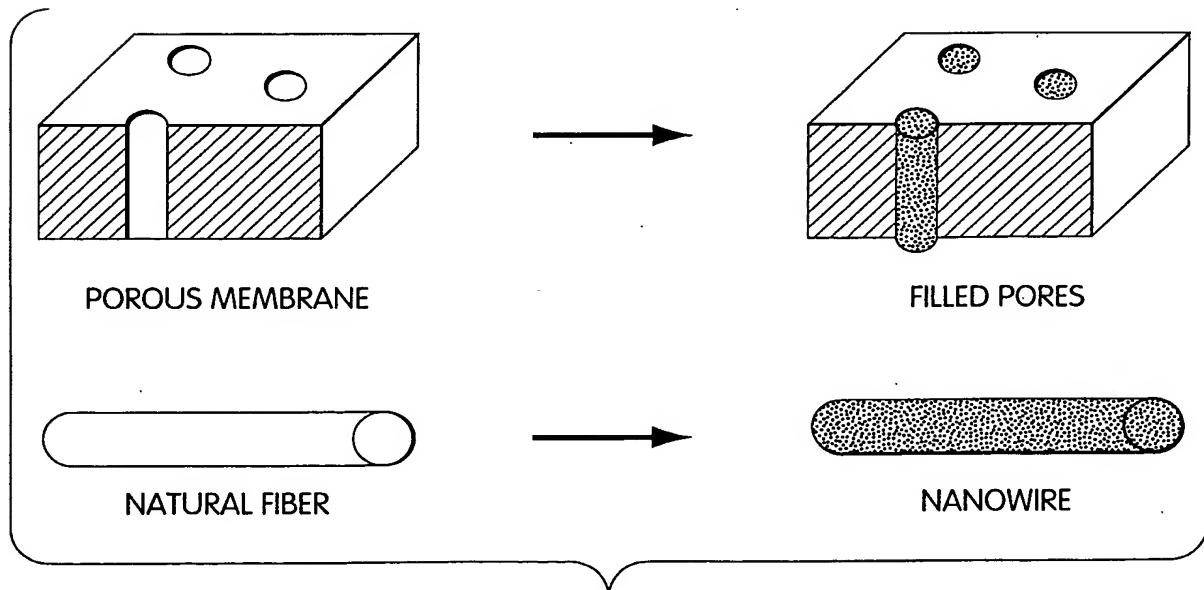


Fig. 6

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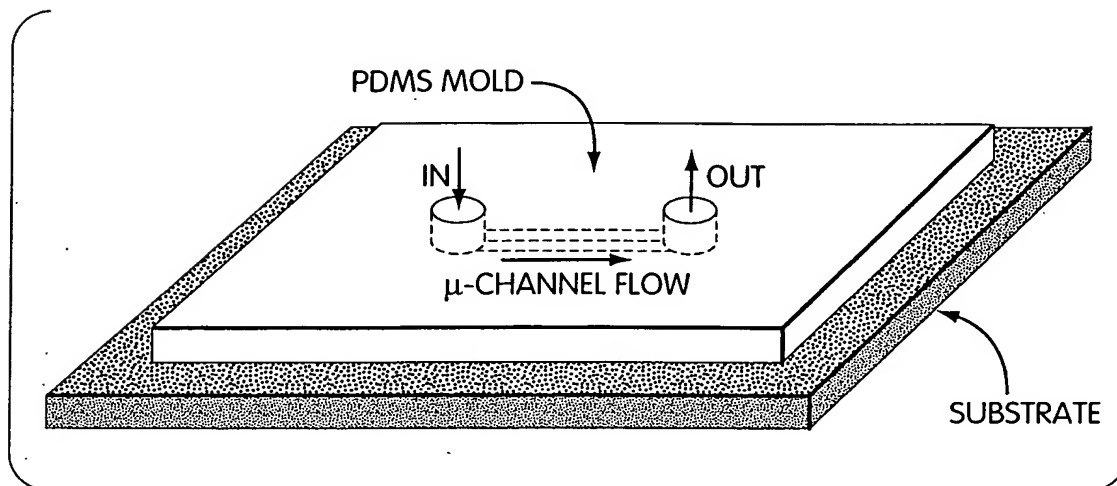


Fig. 7A

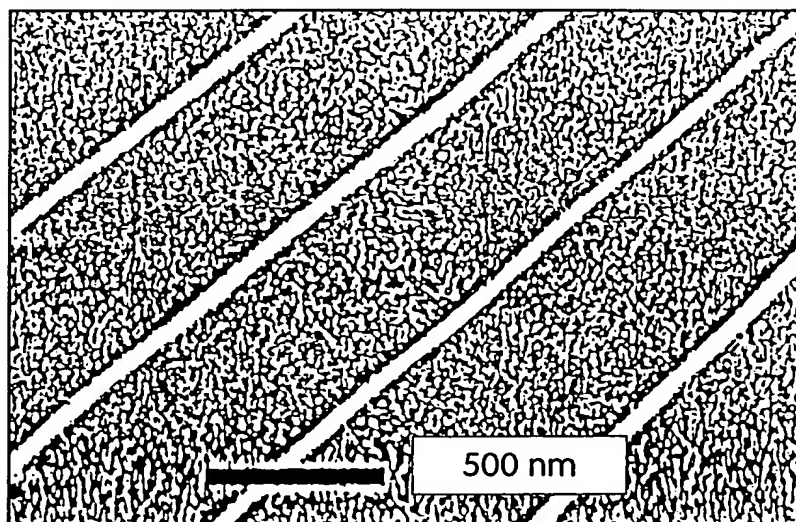


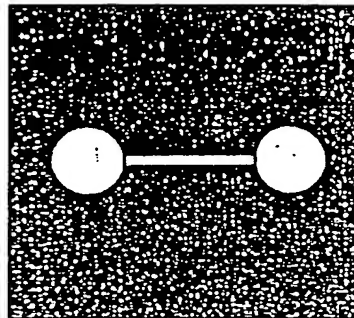
Fig. 7B

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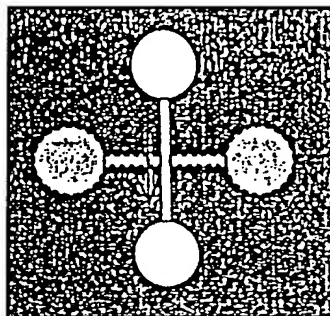
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First layer

Fig. 7C



Second layer

Fig. 7D

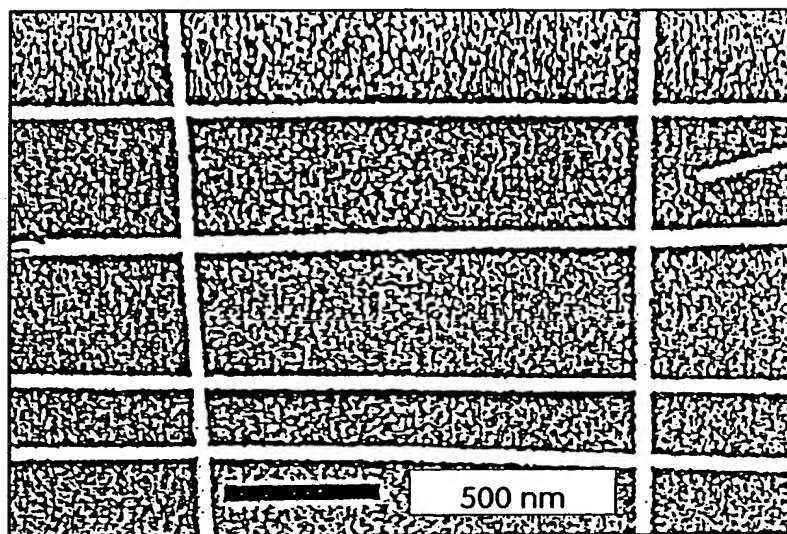


Fig. 7E

I. DIRECT GROWTH

(a) DEFINE NANOCLUSTER CATALYST



(b) INITIAL LCG SEMICONDUCTOR GROWTH



(c) SECOND LCG SEMICONDUCTOR GROWTH

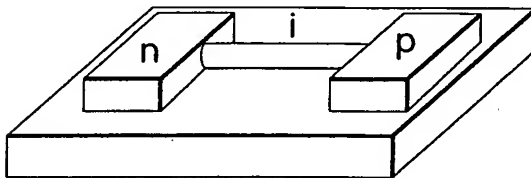


(d) REPEAT (b) OR (c) AS DESIRED



II. POST-SYNTHESIS FUNCTIONALIZATION

(a) FABRICATE NANOWIRE DEVICE



(b) INTRODUCE DOPANTS BY ANNEALING

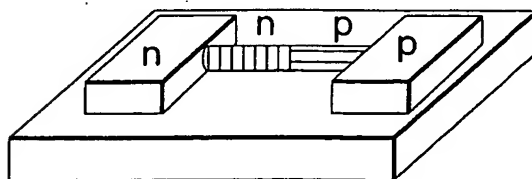


Fig. 8

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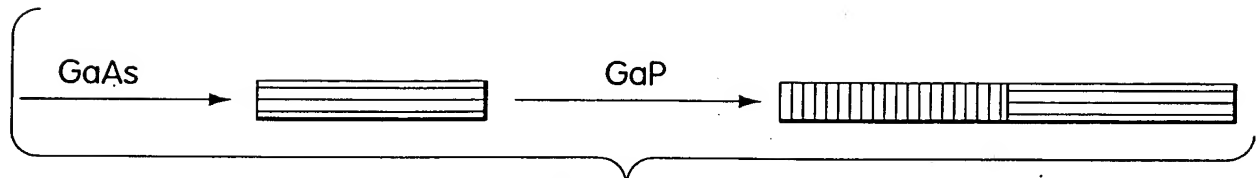


Fig. 9A

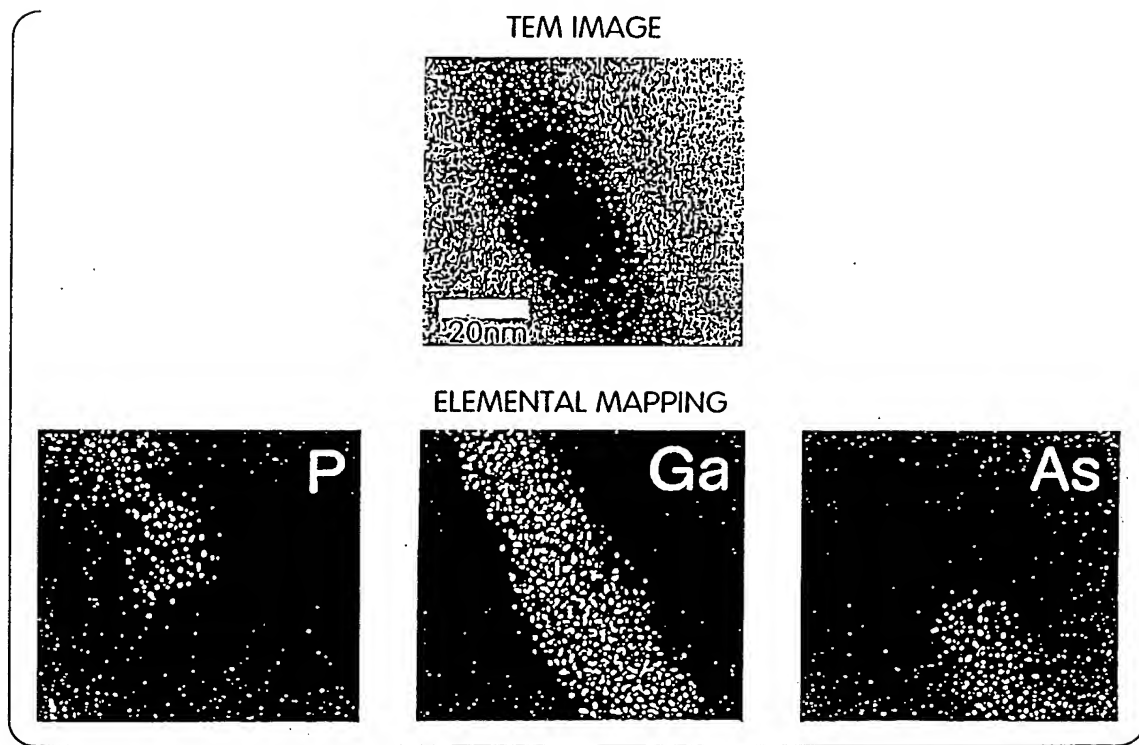


Fig. 9B

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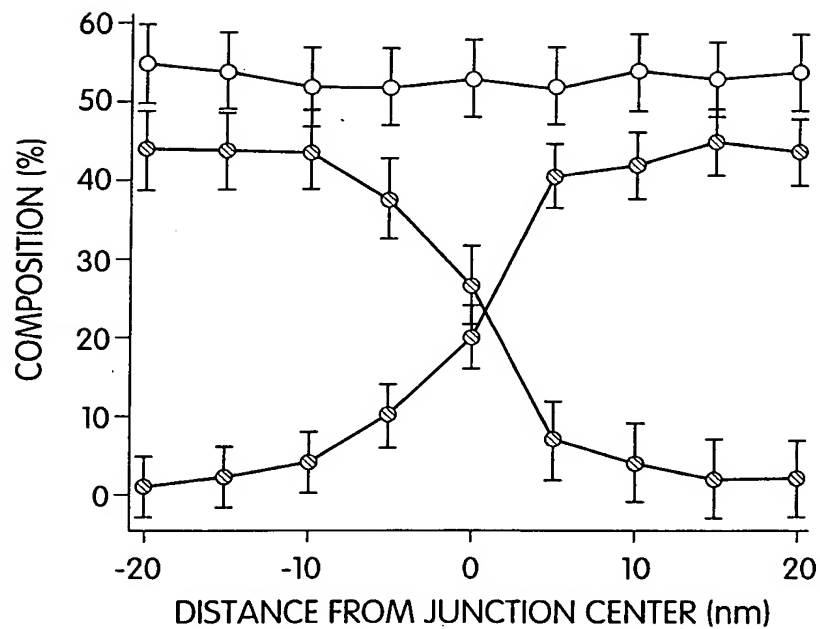


Fig. 9C

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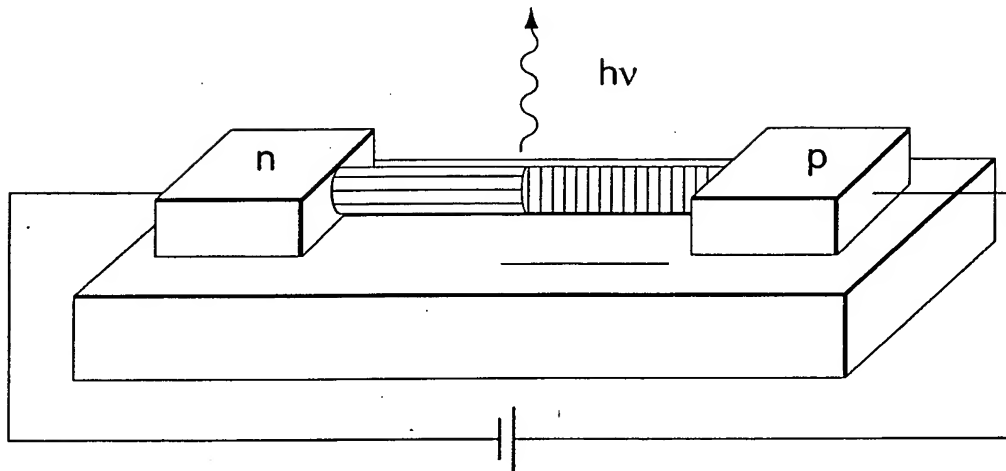


Fig. 10A

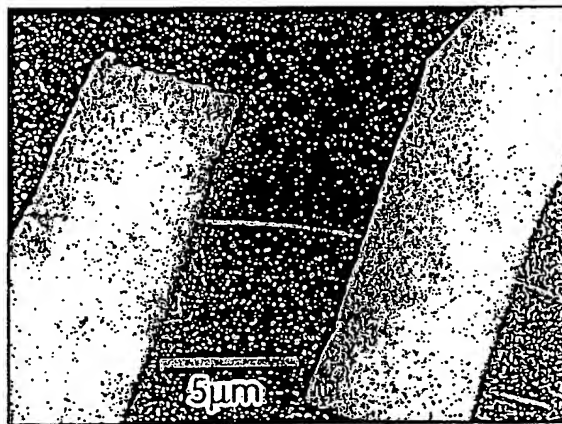


Fig. 10B

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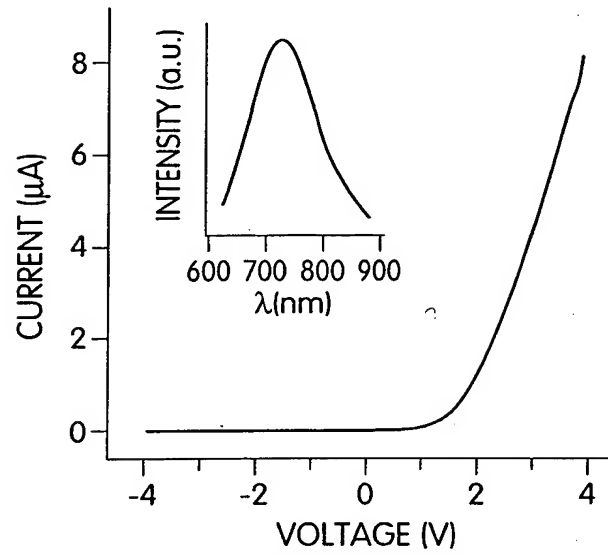


Fig. 10C

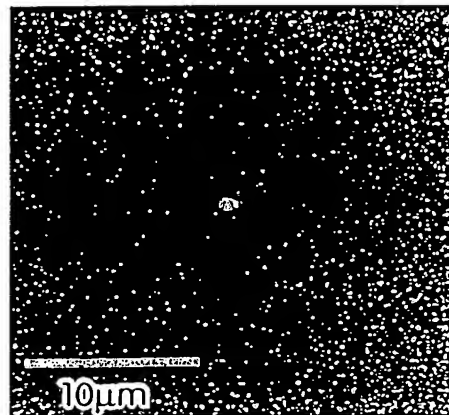


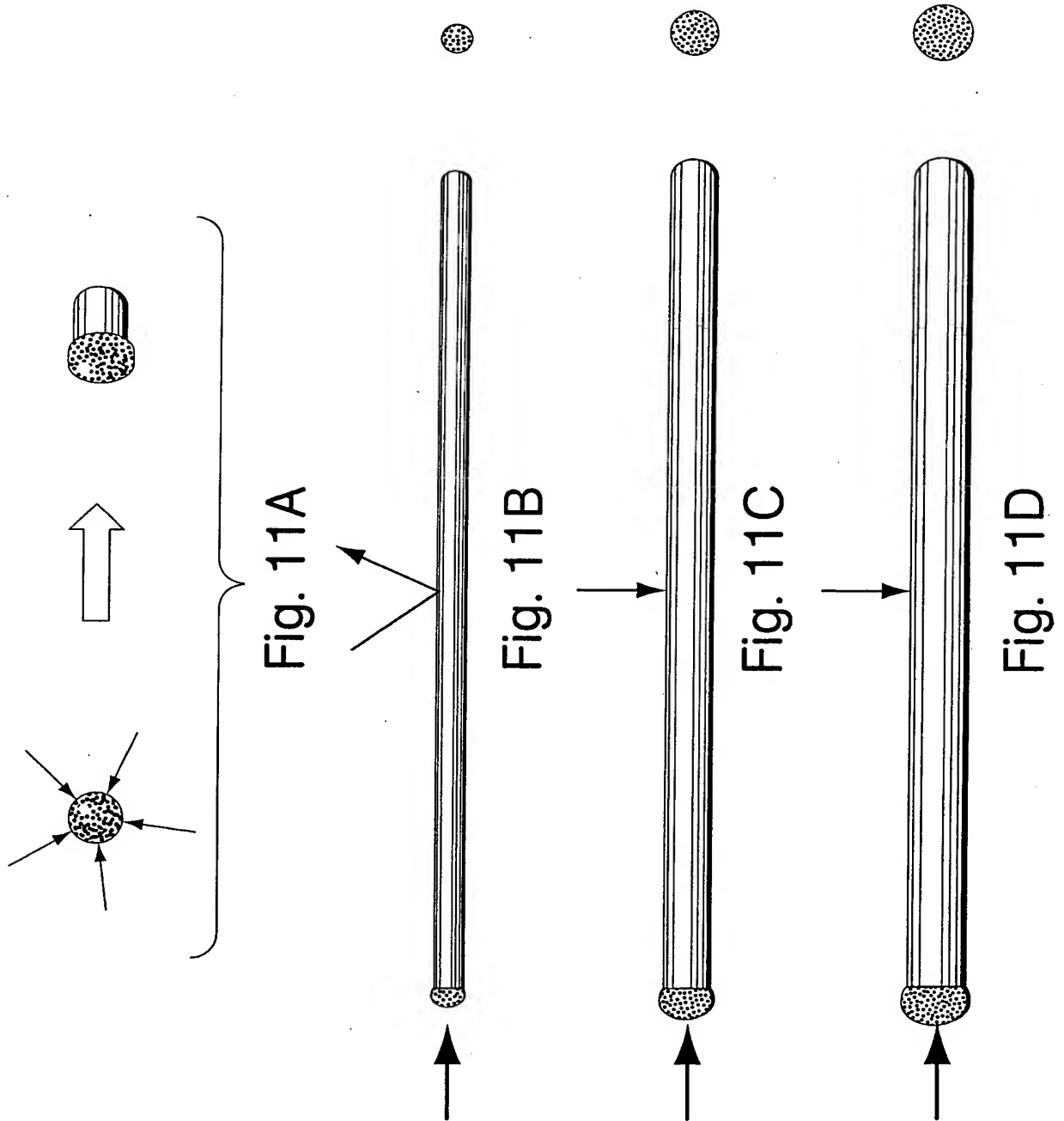
Fig. 10D

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Fig. 12A

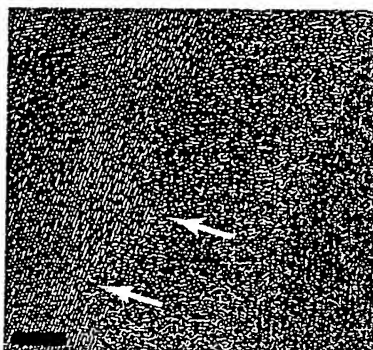


Fig. 12B



Fig. 12C

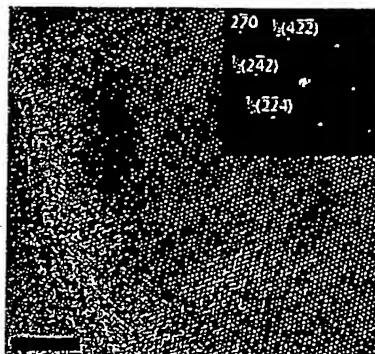


Fig. 12D



Fig. 12E



Fig. 12F

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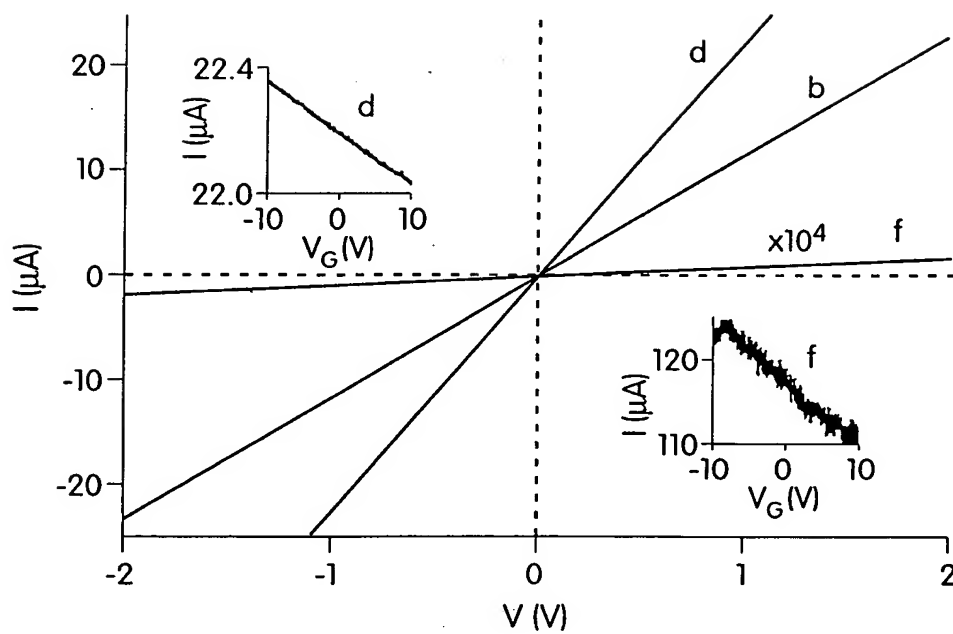


Fig. 12G

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Fig. 13A



Fig. 13B



Fig. 13C

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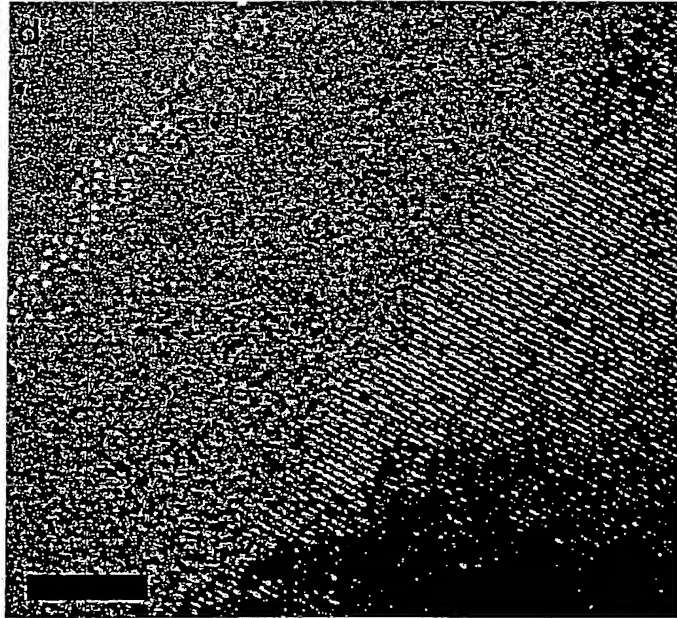


Fig. 13D

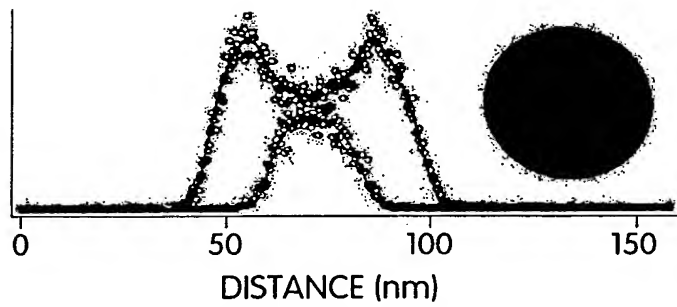


Fig. 13E

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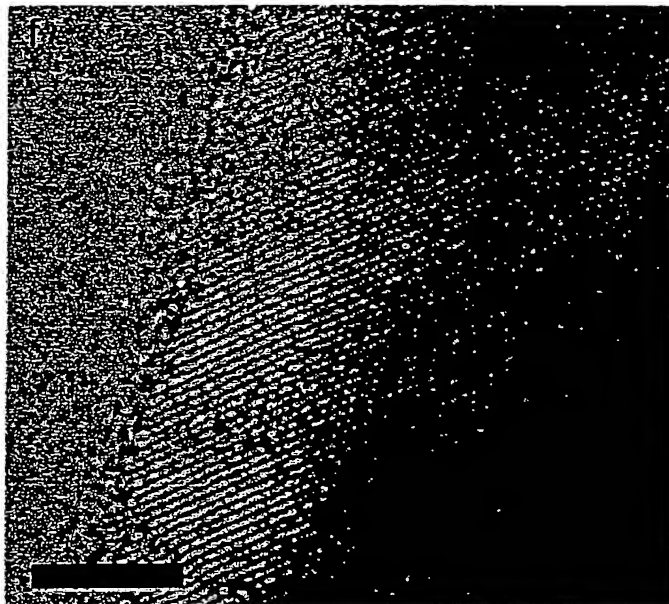


Fig. 13F

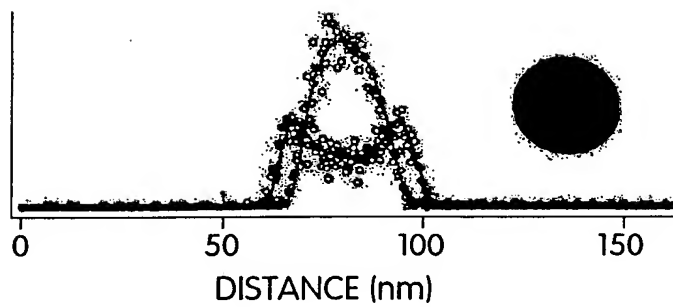


Fig. 13G

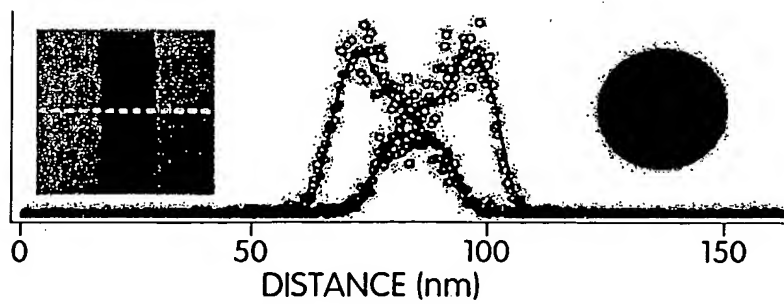


Fig. 14A

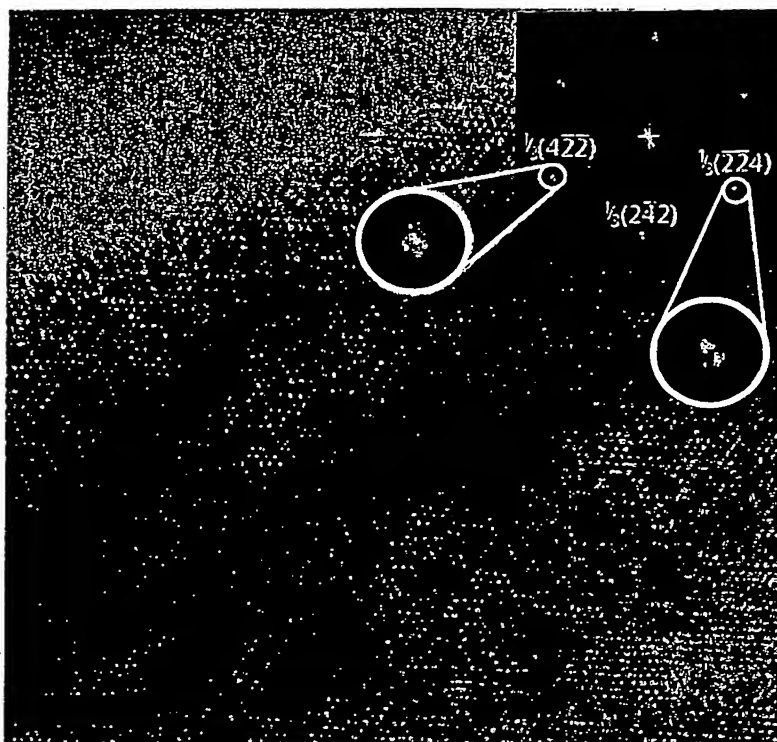


Fig. 14B

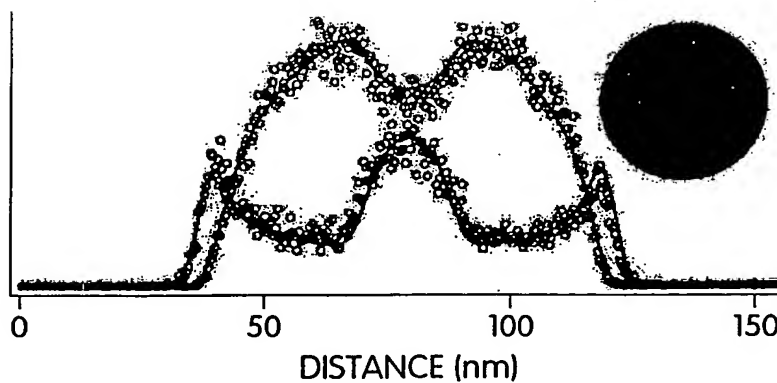


Fig. 14C

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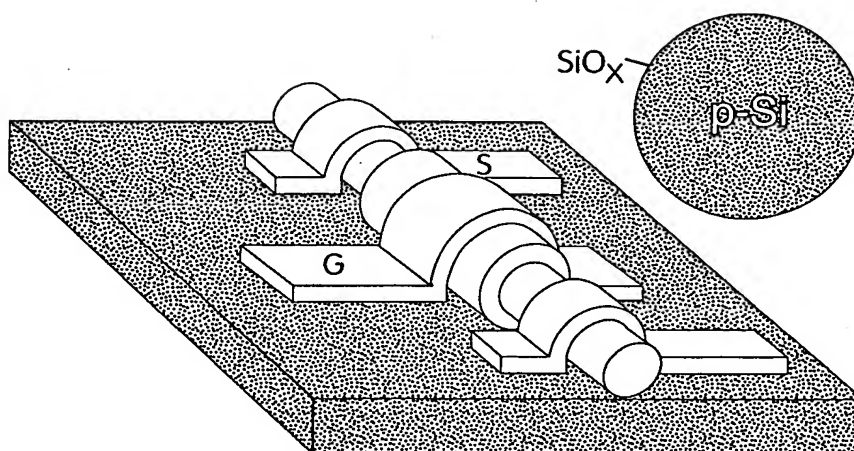


Fig. 15A

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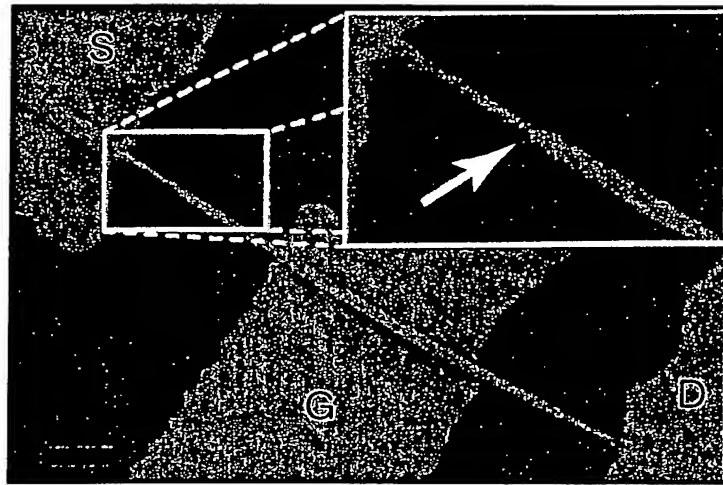


Fig. 15B

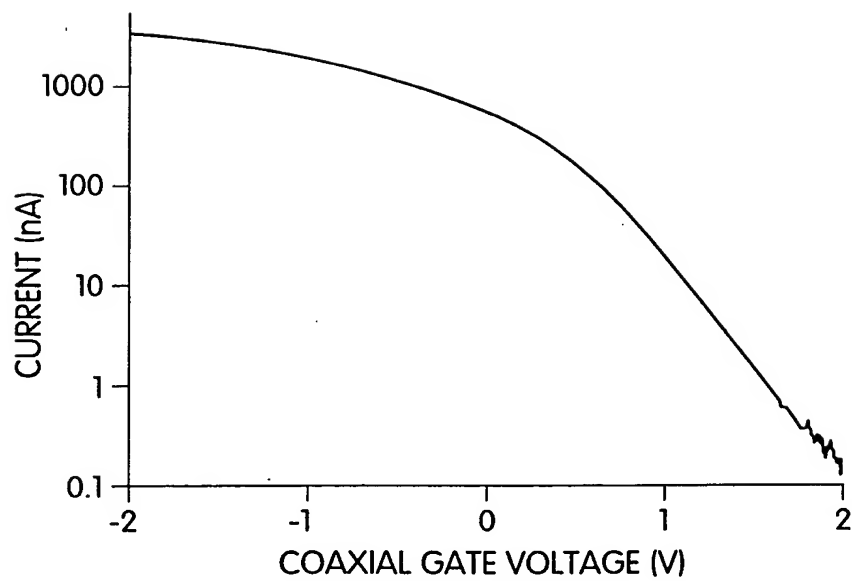


Fig. 15C

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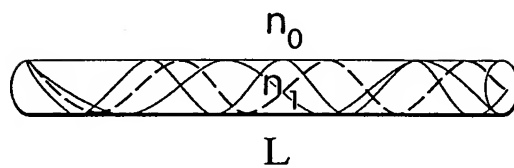


Fig. 16A



Fig. 16B

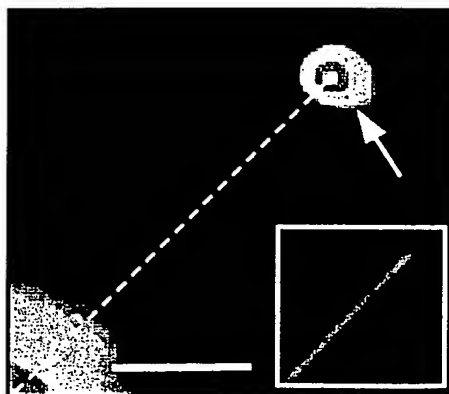


Fig. 16C

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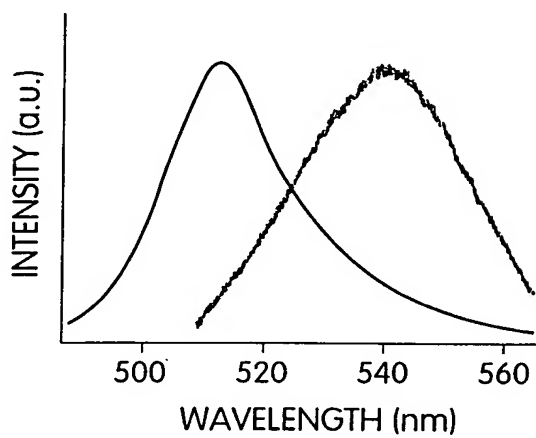


Fig. 16D

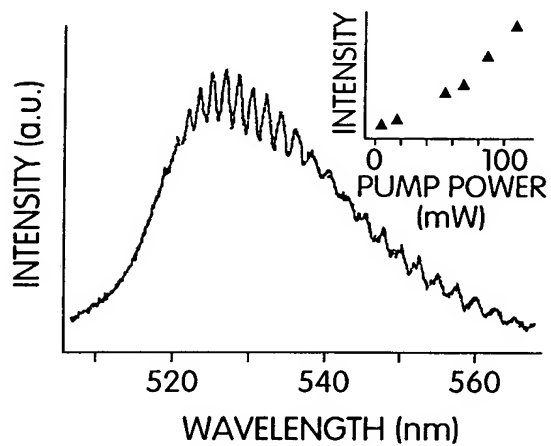


Fig. 16E

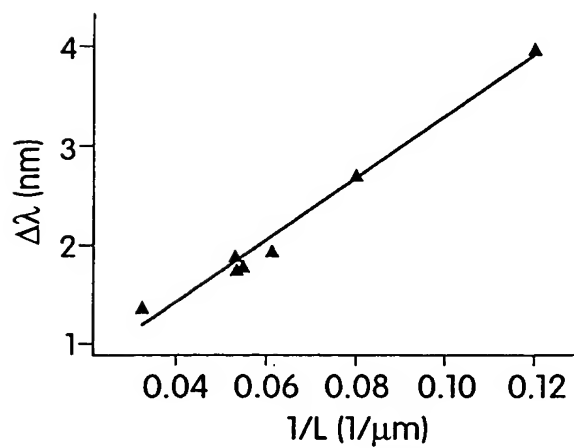


Fig. 16F

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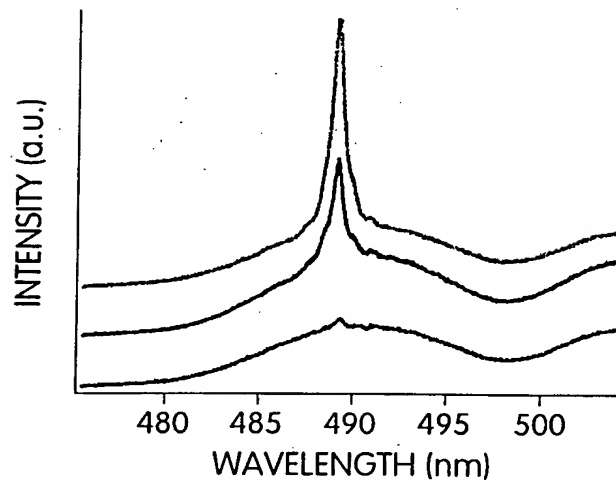


Fig. 17A

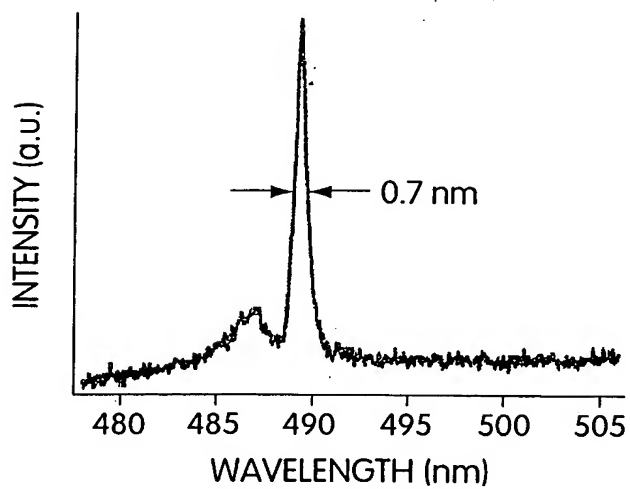


Fig. 17B

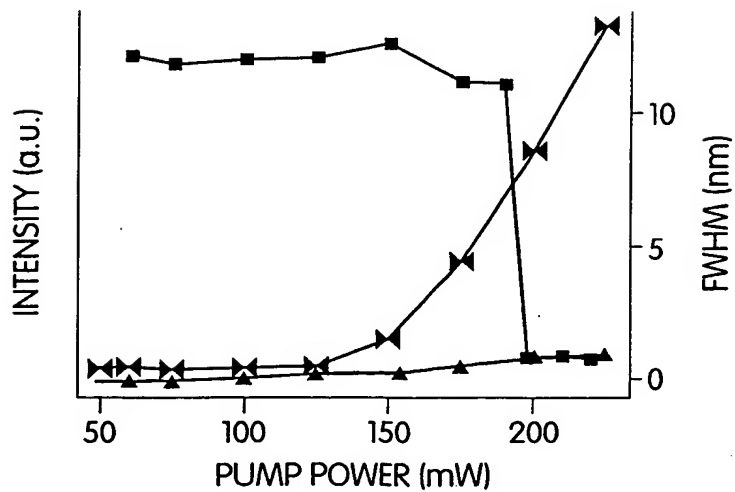


Fig. 17C

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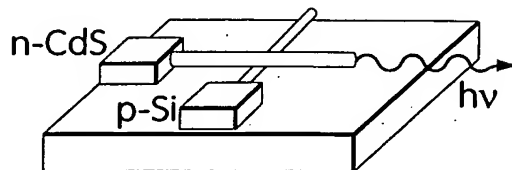


Fig. 18A

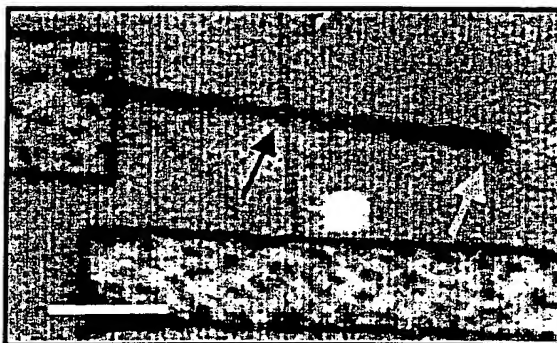


Fig. 18B

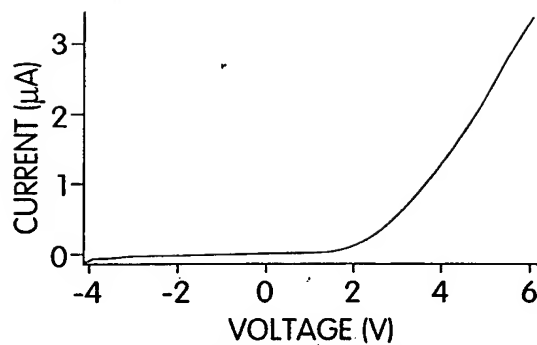


Fig. 18C

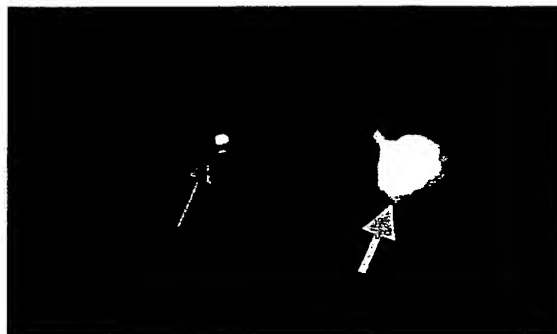


Fig. 18D

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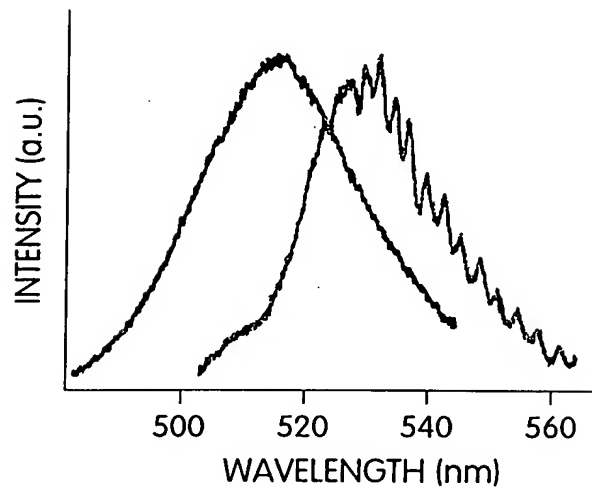


Fig. 18E

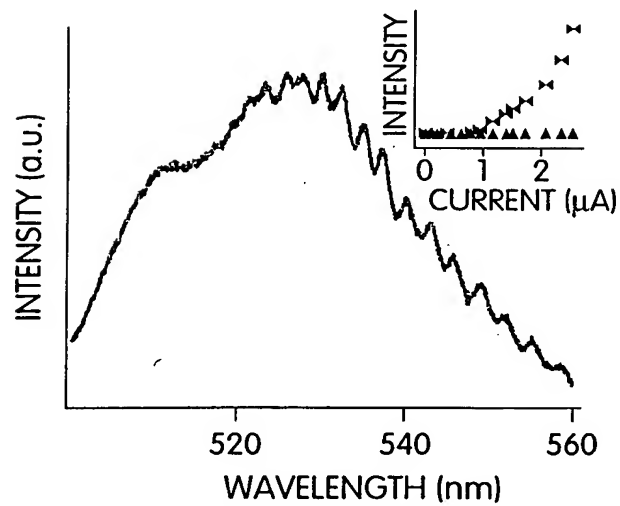


Fig. 18F

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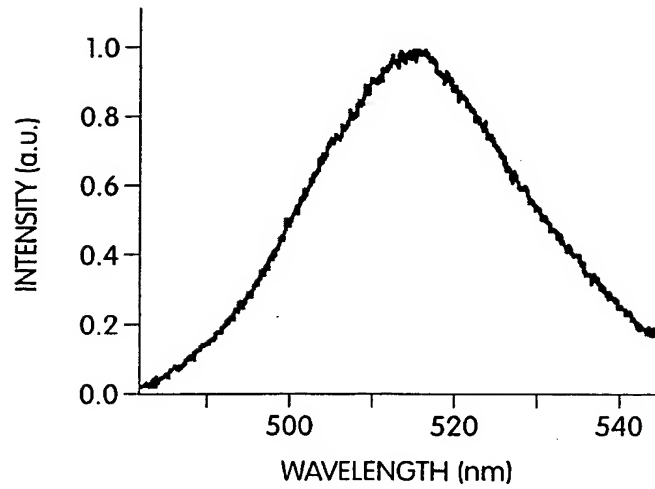


Fig. 18G

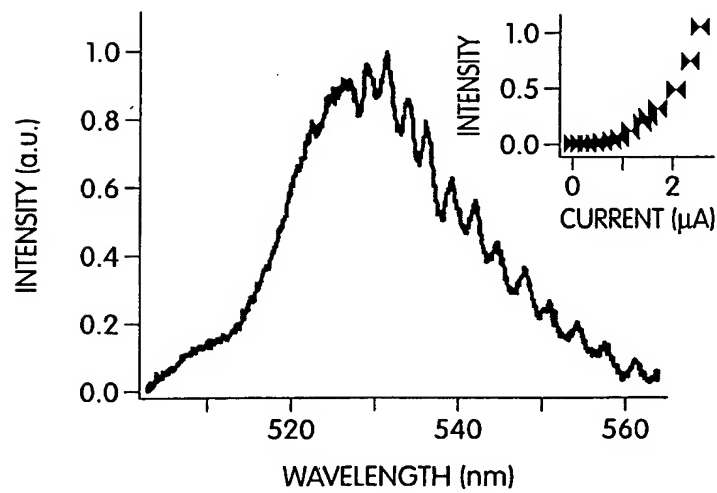


Fig. 18H

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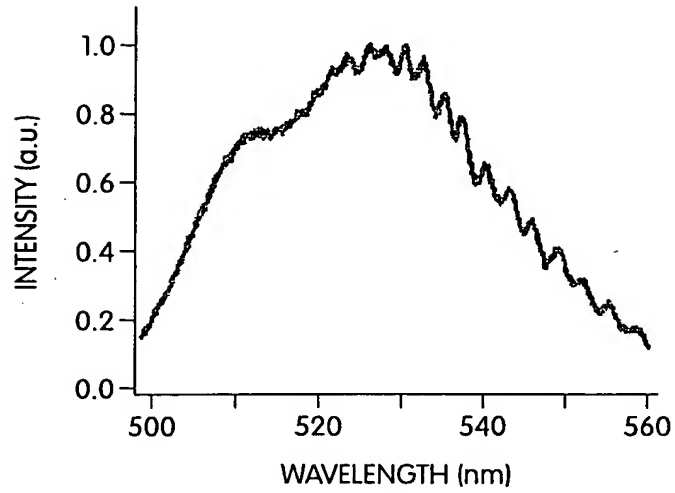


Fig. 18I

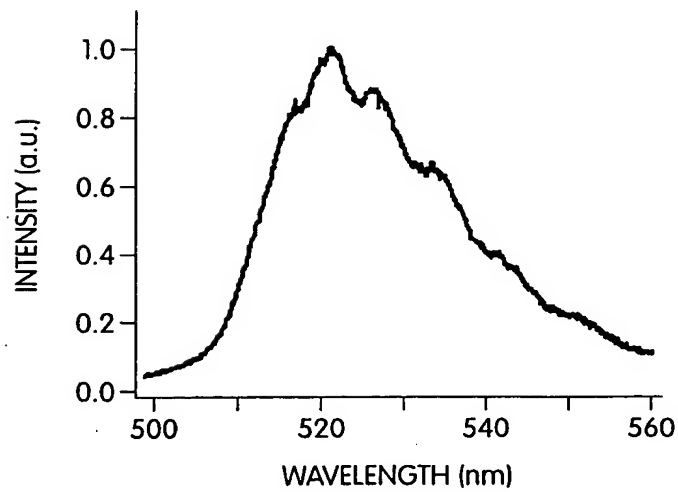


Fig. 18J

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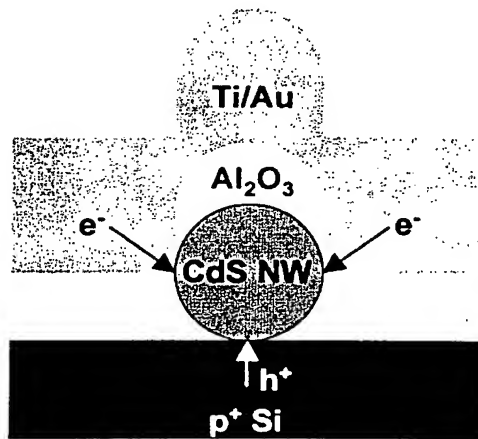


Fig. 19A

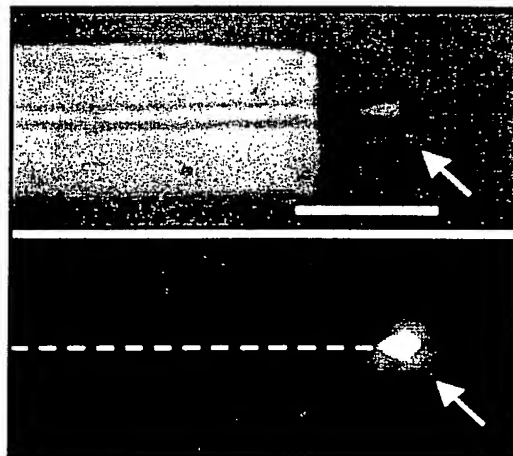


Fig. 19B

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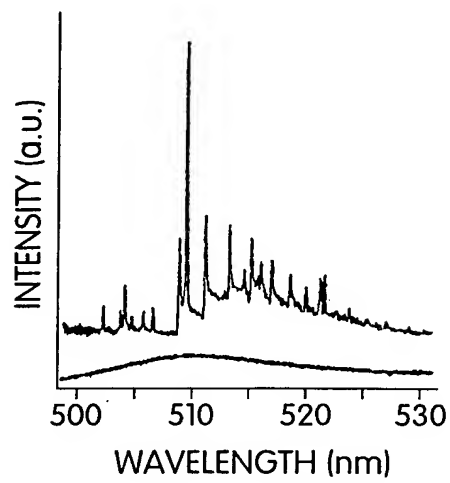


Fig. 19C

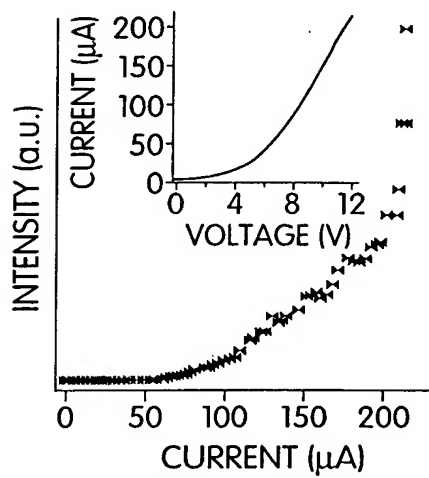


Fig. 19D

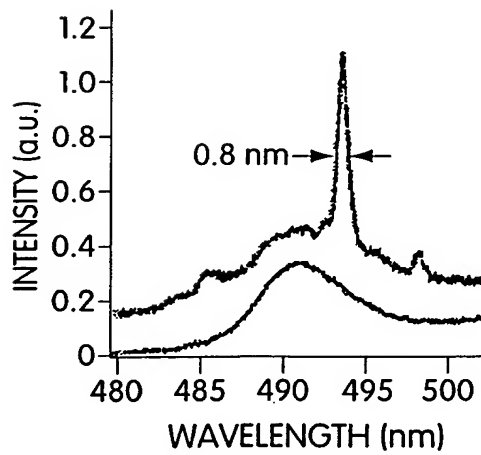


Fig. 19E

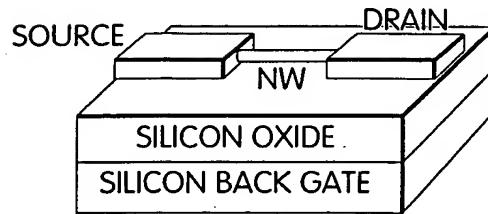


Fig. 20A

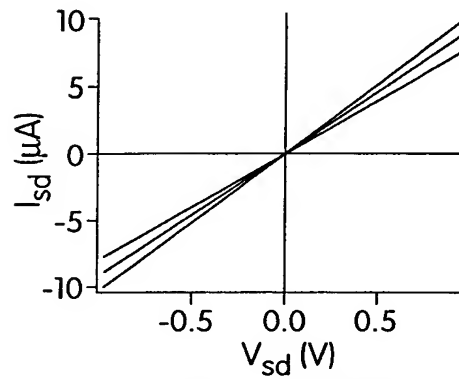


Fig. 20B

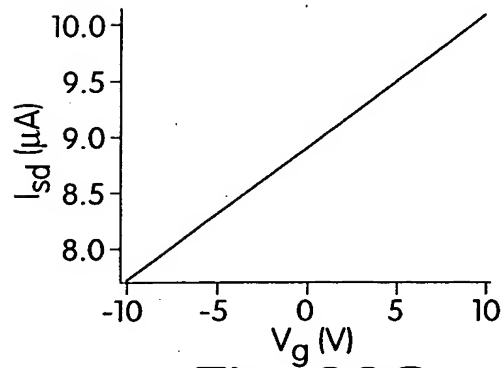


Fig. 20C

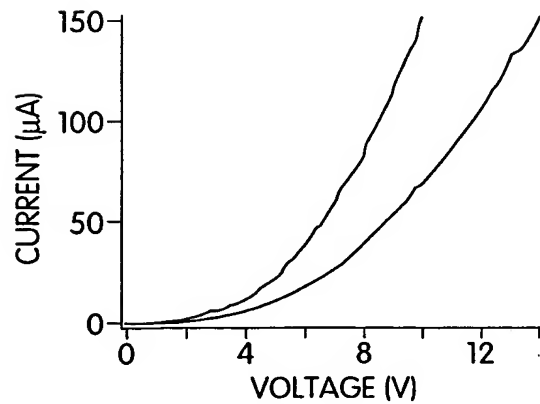


Fig. 21

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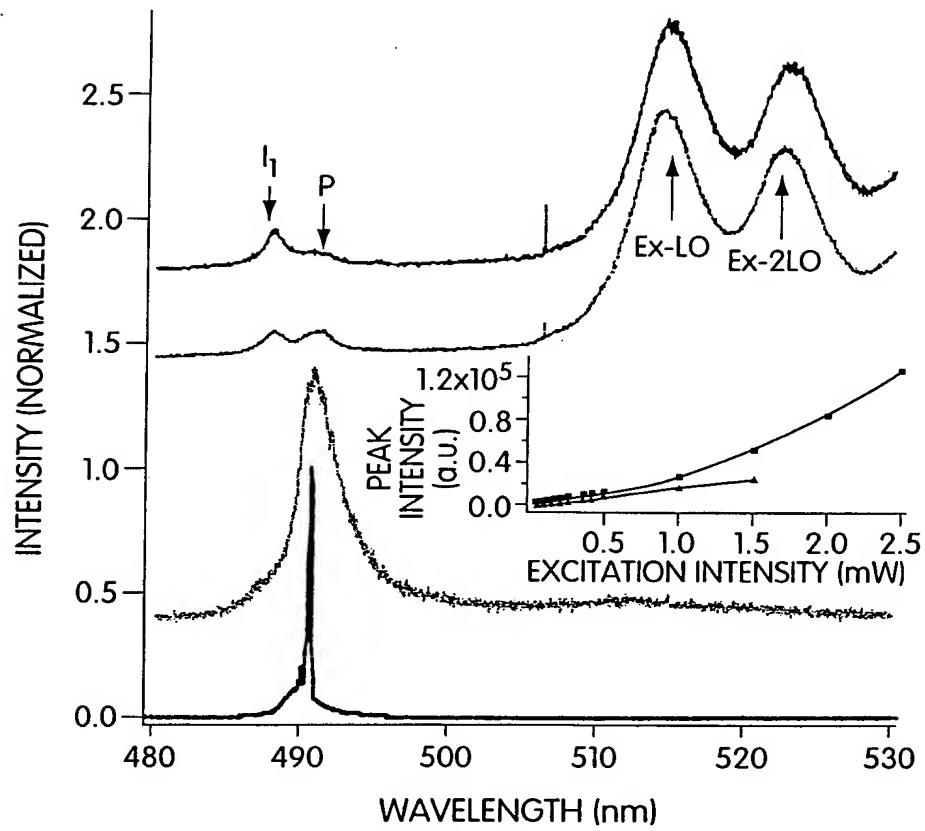


Fig. 22A

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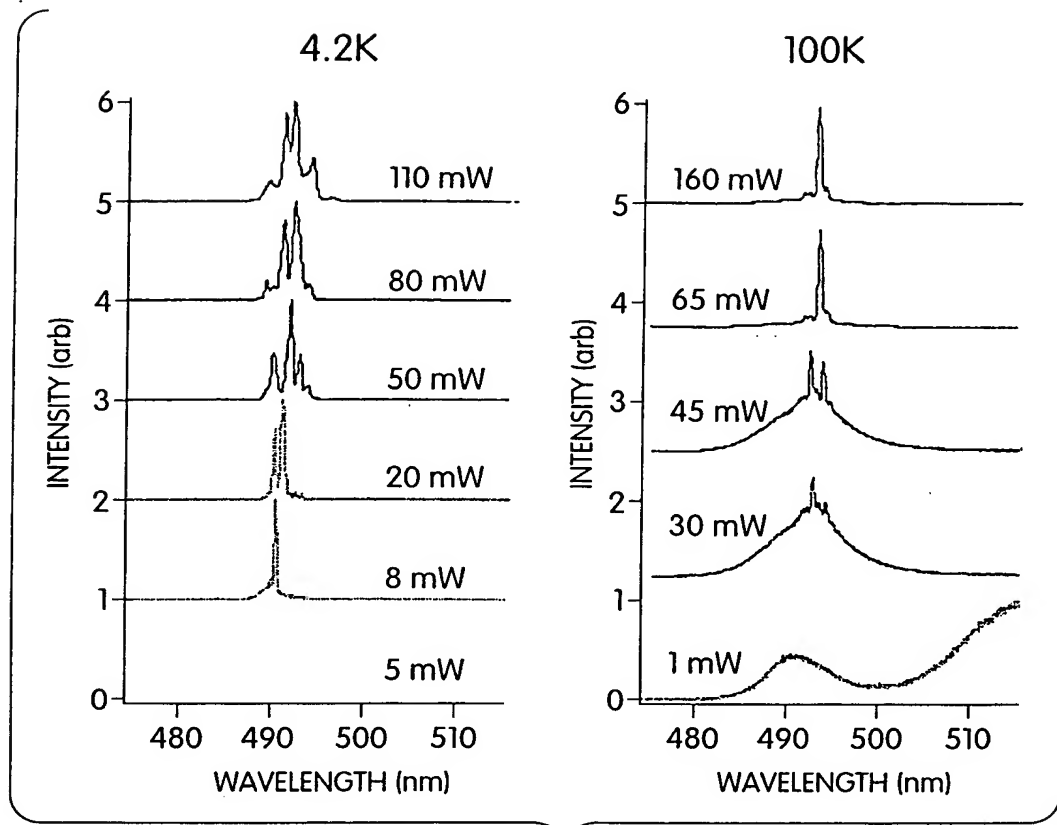


Fig. 22B

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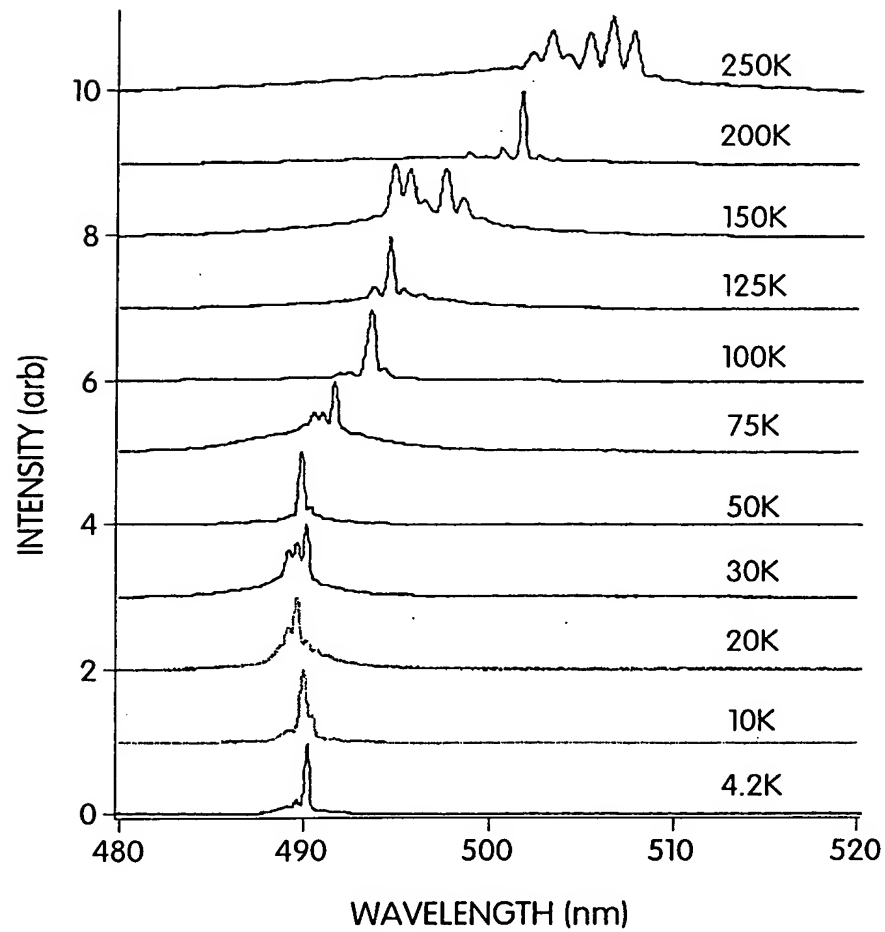


Fig. 22C

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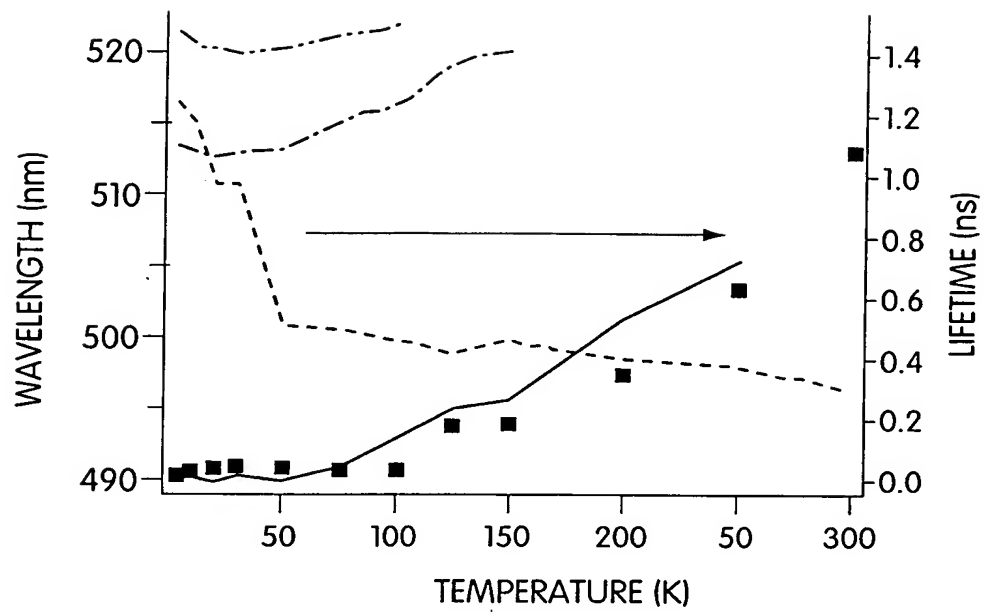


Fig. 22D

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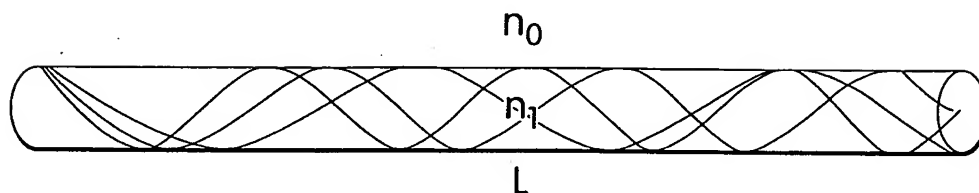


Fig. 23A

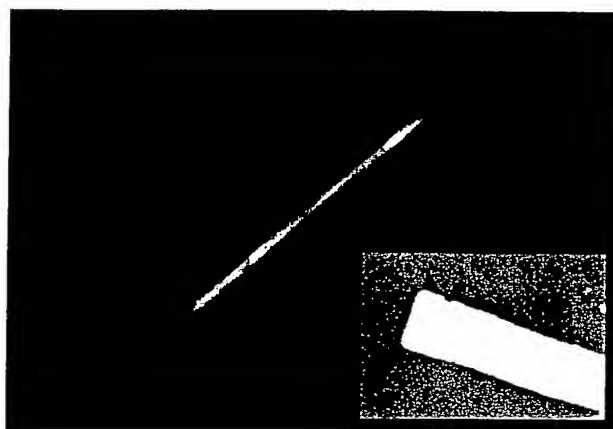


Fig. 23B

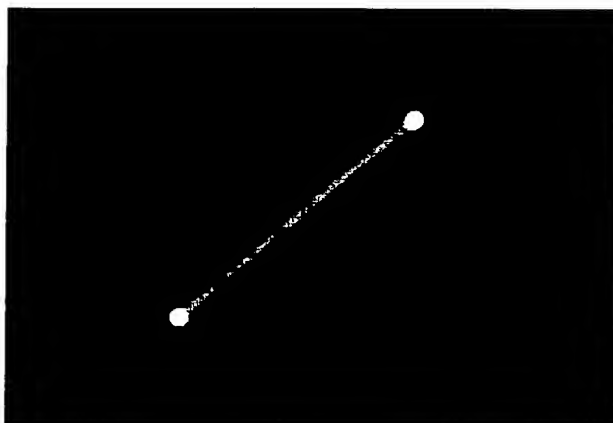


Fig. 23C

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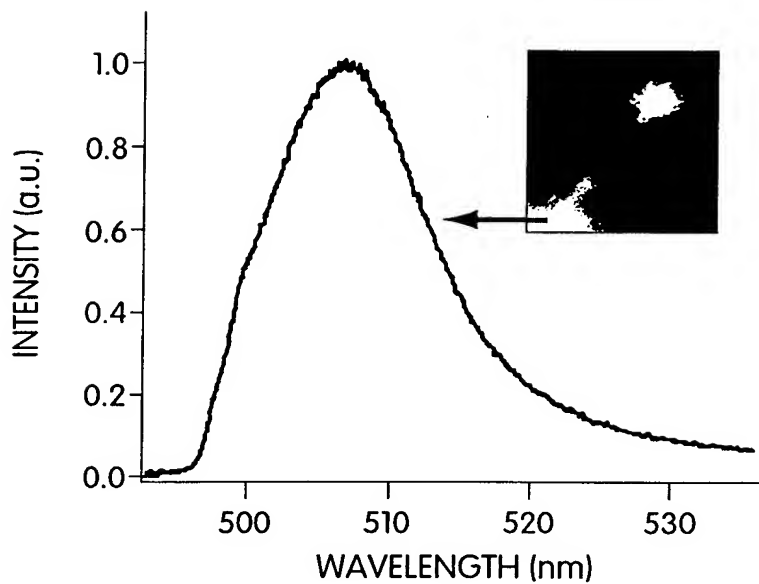


Fig. 23D

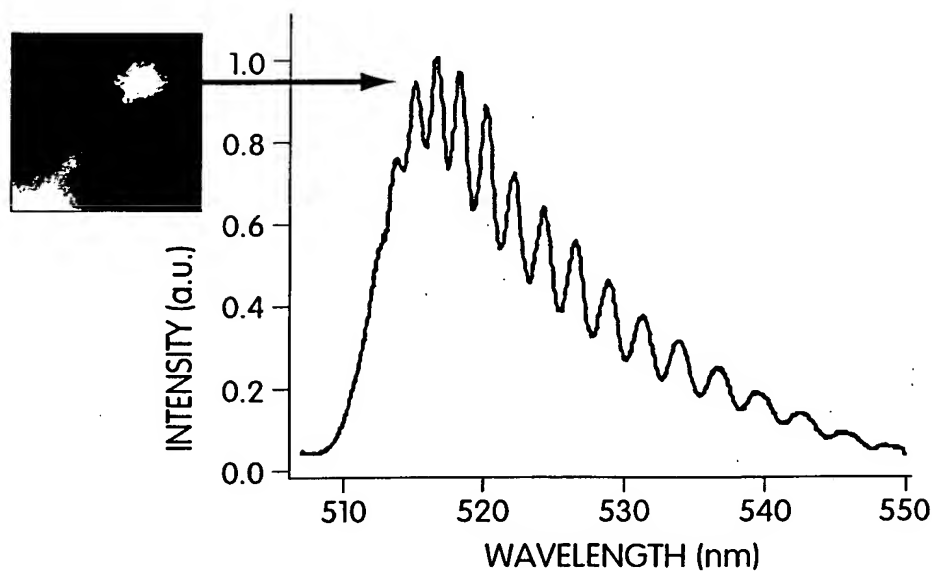


Fig. 23E

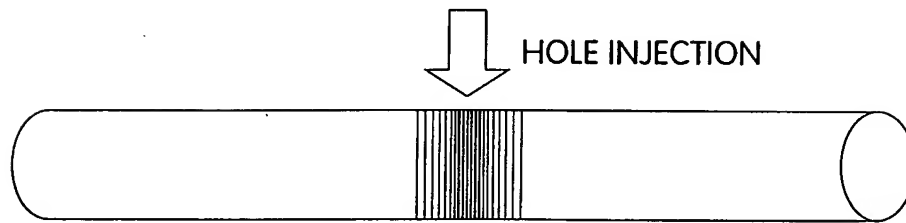


Fig. 24A

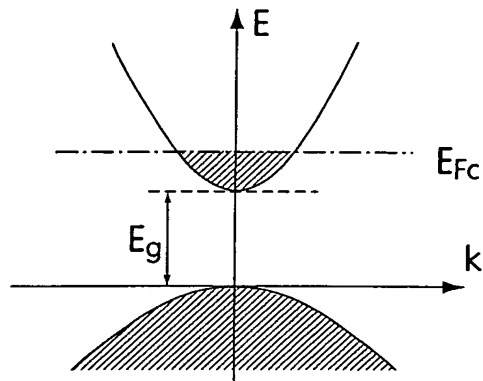


Fig. 24B

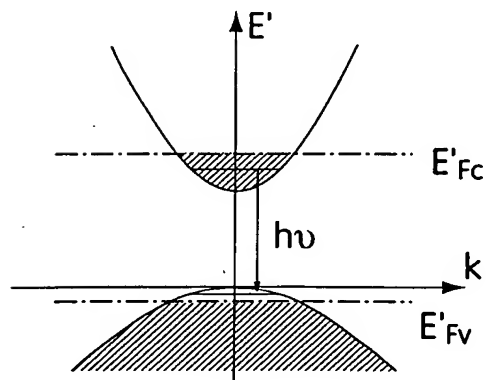


Fig. 24C